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PRIMER FOR TOWN FARMERS Wednesday, March 1, 1933.

FOR BROADCAST USE ONLY

Speaking Time: 10 Minutes. All Regions.

ANNOUNCEMENT: This is Station_____in_____presenting Neighbor Thompson's weekly PRIMER FOR TOWN FARMERS from the United States Department of Agriculture. The subject of this week's talk is FERTILIZERS.

--oOo--

This is the first day of March.

Spring is knocking at the door. And it won't be long until you folks who belong to the great army of back-yard gardeners will be out with the spading fork, digging up the earth, and working the soil full of manures and fertilizers.

I say you'll be working the soil full of manures and fertilizers because that's what a good gardener does. I know from years of experience behind the spading fork that growing gardens is a give and take proposition, and that you've got to give the soil something in the way of manures and fertilizers if you want it to produce the best vegetables, and the finest fruits and flowers.

And speaking of giving a soil manure reminds me of a little poem that runs like this:

"That man will find it hard to live
Who takes and takes but never gives.
And if he wins he is a grafter
Who'll have to face his sins hereafter.

"So gardeners follow Nature's plan
And work in humus when they can,
And feed the soil that grows their truck
So it won't have to trust to luck."

That's the way Mother Thompson and I do. We feed our soil occasionally so that the plants won't have to trust to luck. Luck is not a good fertilizer for plants. Barnyard manure beats it all to pieces. So if you want the best garden, and the best fruits, and the finest flowers, make your soils rich with manures and fertilizers.

But fertilizers cost money, and that's what Mother Thompson and I are short on. We haven't got as much money as usual this spring, so we had to figure out some way of feeding the soil that wouldn't cost much.

That's what I'm going to tell you about.

First, I'm going to tell you what fertilizers do for plants---second, where the 3 main plant fertilizers come from----and finally, how Mother Thompson and I are solving the fertilizer problem by using home-made fertilizers.

W. R. Beattie, garden specialist of the United States Department of Agriculture, says that out of the 90 or more chemical elements known to science, only about 13 are used by plants, and that out of these, only about 4 are used as fertilizers.

The four chemical elements that plants need, and the 4 that are commonly added to the soil in the form of commercial fertilizers and lime are;---- Nitrogen-----Phosphorus-----Potash-----and Calcium.

Let's take these up one at a time---Nitrogen, first.

Nitrogen helps plants to grow leaves. And leaves play an important part in the life of a plant. So Nitrogen is needed in the garden soil.

We get Nitrogen from barnyard manure, rich soil, compost, leguminous plants, and from Nitrate of Soda, Sulphate of Ammonia, cottonseed meal, fish scrap, tankage, and so on.

Phosphorus is next. Phosphorus encourages blossoms and seeds. So phosphorus is needed in the garden soil, especially where you're growing flowering plants.

We get some phosphorus from barnyard manure. But barnyard manure, as a rule, is not as rich in phosphorus as it is in nitrogen, or potash. In fact, it's a little short in phosphorus. So we get most of our phosphorus from what we call "superphosphates" or from bone meal. Superphosphate is made by treating phosphate rock with sulphuric acid.

Potash is the third element that plants need. Potash strengthens the plant, and helps the formation of stem and leaf growth. And both are important in the life of a garden plant. But too much potash may retard the blossoming period, so be careful how you use it, and consult your county agricultural agent when in doubt.

We get potash from many sources----barnyard manure---from the potash salts such as Sulphate of Potash, and Muriate of Potash---and from ordinary wood ashes. Wood ashes are a good source of potash, but Beattie says keep the ashes dry, and be sure to mix them thoroughly and uniformly with the soil. If you don't they are apt to burn the plants.

The fourth chemical element that a plant needs is Calcium. Calcium is just another name for lime. I won't say much about calcium now except that most of it comes from lime or lime products, and a little from bone meal.

A great many of the gardeners in our community use what they call a complete fertilizer. That is a fertilizer containing balanced proportions of Nitrogen, Phosphorus, and Potash.

A complete fertilizer contains the principal elements that the soil lacks, except lime. An example of a complete fertilizer is, say a 4--12--4.

That means 4 per cent of nitrogen, 12 per cent of phosphoric acid and 4 per cent of potash. The first figure usually represents the nitrogen in the fertilizer. The second figure usually represents phosphoric acid and the last potash. That's the usual order, nitrogen---phosphoric acid, and potash.

Now I'll tell you how Mother Thompson and I are solving the fertilizer problem at our house this spring by using home-made fertilizers.

Mother Thompson and I have been raising chickens for about 15 years. And we have found that chicken manure is one of the best garden fertilizers that you can get. It's rich in the 3 chemical elements that plants need, and is especially rich in nitrogen. And since we have plenty of chicken manure, we are using it more than ever this spring, because like thousands of other families, we have had to reduce our expenses.

But chicken manure is not only rich, but it's strong, so be sure to mix it thoroughly and uniformly with the soil when you apply it.

Sheep manure is another good fertilizer. It is fairly well balanced, but a little richer in nitrogen than it is in the other elements. Sheep manure is fine for small crops like carrots, beets, celery, lettuce, and the crops that grow fast, and need plenty of available nitrogen in the soil. One of our neighbors is using sheep manure on his lawn this spring.

Cow manure is a good fertilizer too. Cow manure is a little shy on phosphorus, but it makes a very good fertilizer for gardens, and is especially fine for roses. We use cow manure on our roses nearly every spring. We get it from our dairyman.

Another good fertilizer is barnlot or barnyard manure. Barnyard manure, like cow manure, is a little short on phosphorus, but even so it is one of the best fertilizers you can use because it contains humus, or decaying organic matter. And that's what gardens and lawns need.

Still another good fertilizer is rich dirt from the woods. Mother Thompson and I get a few sacks of rich soil from the woods nearly every spring. We use it on our lawn. We spread it over the lawn by hand, like a farmer sows grain. The soil settles in the holes and depressions in the lawn and fills them up. When we finish sowing the soil, we run the roller over the lawn and pack the soil in the little holes. Rolling not only packs the rich soil in the little holes, but it levels the ground, and makes mowing easier.

But if you use rich soil from the woods, be sure to get it from your own land, or from where you have permission to get rich soil. I heard of a man who got shot for taking rich soil from land without the owner's permission. But of course, I know you wouldn't do that, and I'm only mentioning it as a matter of interest.

If your soil needs potash, and you burn wood-----you can use the ashes on your soil. Wood ashes are rich in potash and lime. But be sure to mix the ashes with the soil thoroughly when you apply them. In fact, it's a good idea to always mix fertilizers thoroughly and uniformly with the soil. That prevents the chemicals from burning the plants.

And don't forget the compost. A compost is nearly always a good source of fertilizer, especially nitrogen. But don't put peelings and decaying fruits in the garden compost. They might produce disease and insect pests along with the compost.

And now I'll repeat the list of home-made fertilizers, some of which we are using in our community this spring. Here they are----6 of 'em.

Chicken and poultry manure of all kinds. One of the best fertilizers for gardens and flowers.

Sheep manure---whole, ground, or pulverized. A fine fertilizer. Rich in nitrogen, and especially fine for fast-growing garden plants and for lawns.

Cow manure---dried, or composted. Shy on phosphorus, but a very good fertilizer for the garden, and especially fine for roses.

Barnyard manure. Low in phosphorus, but rich in humus, and one of the best general garden fertilizers that you can get.

Rich soil from the woods. Rich in nitrogen, and fine for lawns, flowers, and vegetables.

Compost. Usually rich in nitrogen and humus.

That's the list of home-made fertilizers.

And that's all for this time.

And now in conclusion, Mother Thompson and I bid you good-bye and good luck until this time next Wednesday.

ANNOUNCEMENT: This is Station_____in_____concluding the weekly PRIMER FOR TOWN FARMERS from the United States Department of Agriculture.

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PRIMER FOR TOWN FARMERS. Wednesday, March 8, 1933.

(FOR BROADCAST USE ONLY)

Speaking Time: 10 Minutes. All Regions.

ANNOUNCEMENT: Another Wednesday has rolled around, and once more it's time for Station_____to present the weekly PRIMER FOR TOWN FARMERS from the United States Department of Agriculture. The subject of this week's talk is GARDEN PRACTICES. And here's the message------

----ooOoo----

Spring is here.

Not officially, of course, because this is only the eighth day of March, and spring doesn't begin officially until the twenty-first of March------13 days from now.

But the spirit of spring is already in the air because back-yard gardeners are donning overalls, sharpening their garden tools, and cleaning up their gardens. And when you see a town farmer in overalls out cleaning up his garden at this time o' year, you can put it down that spring is peeping around the corner, and that the garden season is on.

But early gardeners, especially, have one big problem confronting them before they turn much soil. That problem is the weather.

Most gardeners farm at the mercy of the weather. And some, no doubt, would give a tidy sum to know at the beginning of the season whether it's going to be a wet year or a dry year. Whether it's going to be stormy or fair, and whether it's going to be hot or cold.

The correct answers to those questions would tell you what crops to plant, and when to plant them; how to cultivate, and when to do it. But that kind of a forecast is beyond the power of man. About all we can do in settling the weather is to talk about it. And that reminds me of a little poem that runs like this:

"What is it that moulds the life of man?
The weather.
What makes some people black, and others tan?
The weather.
What makes the Zulu live in trees,
And Congo natives dress in leaves
While others go in furs and freeze?
The weather."

Truly the weather shapes the destinies of man, and truly it shapes the results of many back-yard gardens. But there isn't much you can do about the weather unless you are amind to drag out the garden hose and produce artificial rain for the plants when they are hungry and dry. And that, you know, is expensive.

The other problems that the gardener has to settle are when; what and how to plant. I suppose the "moon" causes some gardeners more trouble than all the chickens in the neighborhood, and probably more disappointments than a breakdown on the road to a community picnic.

Some gardeners feel that they simply must plant certain crops in the light of the moon, and that certain other crops will be a total failure unless they are planted in the dark of the moon.

When I was growing up the practice in our community was to plant our beans on Good Friday.

But one of my boyhood jobs was to tend the garden. And I planted a great many beans------and a lot of 'em on Good Friday. But as I recall we made as good beans, and about as many of 'em when we planted on some other day as we did when we planted on Good Friday.

Besides, Good Friday isn't bean-planting day all over the country anyway. Iowa gardeners plant potatoes on Good Friday. But Good Friday isn't a general potato-planting day either. Some of the gardeners around Saint Louis and other middle sections plant their potatoes on Saint Patrick's Day. And certain gardeners in other sections plant on still other days.

A practice that is common among the gardeners of one part of the country is sometimes not even known among the gardeners of another part. Most of the practices are not only local and sectional, but they have no connection whatever with the growth and development of plants.

A few years ago the United States Department of Agriculture undertook to find out if the moon has anything to do with the growth and development of garden crops.

They planted a number of plats of potatoes in the light of the moon, and a number of plats in the dark of the moon, and checked and rechecked until they were satisfied that the moon has nothing whatever to do with the growth and yield of potatoes.

Where the soil and seed conditions were the same they got good crops of potatoes regardless of the phase of the moon at the time of planting. Where soil and seed conditions were not favorable to the best growth of potatoes they didn't get very good crops.

In other words, the results of the experiments showed that soil and seed govern the results in growing potatoes rather than the moon, and that it's better to put your faith in good soil, and good seed, and good cultivation than it is to trust in the moon.

Some people have an idea that the moon controls the weather. But scientists tell us that it does not. Careful studies of the records of the moon's movements have shown that the moon's influence on the weather, beyond a little tidal effect on the air, amounts to practically nothing.

The idea has been expressed in an old proverb that runs like this:

"The moon and the weather
May change together;
But the change of the moon
Does not change the weather.

If we had no moon at all,
And that would surely be strange;
We'd still have weather,
And weather the same."

Scientists tell us that the small amount of light transmitted by the moon is not enough to have any influence on the growth and development of such plants as potatoes and other similar crops that grow beneath the soil.

W. R. Beattie, garden specialist of the Department of Agriculture says that he doesn't pay any attention to garden practices and superstitions when it comes to planting out his garden in the spring. He says that he goes by the condition of the soil, and temperature and that when the soil and temperature are right, he plants regardless of whether it's in the light, or the dark of the moon. Whether it's on Good Friday, or Saint Patrick's Day, and whether it's on Friday the 13th, or some other day.

He says that the main things to watch in the spring are not the moon, but the weather, the seed, and the soil. He says that many gardeners fail to get a good stand of plants because they use a poor grade of seed, or because they fail to put the seed in right.

He tells a story on one of his neighbors who wanted to plant some carrot seed on a certain day because he thought the moon was right at that time but it rained that day, and his neighbor didn't get the carrots planted.

But the weather cleared up in a few days and he got the carrots in. That night another big rain came and packed the ground so hard, and so tight, that only about one-tenth of the carrots came up. The neighbor said the trouble was in the moon, but Beattie said it was the rain.

He says that you've got to break the hard crust that forms after a hard beating rain before plants like beets, carrots, lettuce, and parsley can break through the soil. And if it comes a hard beating rain in a day or two after you plant these crops, and you fail to get that hard crust broken on top of the drill, you won't get the best stand of plants regardless of how good your seed may be.

But there are ways to prevent the soil from baking and forming that hard crust over the seed. One way to do it is to lay a narrow strip of thin burlap directly over the drill, and keep it there until the little plants begin to peep through the ground. When the plants start coming through the ground, take off the burlap, and you'll find that the soil is about right for the plants to come up. Another method is to sprinkle a little sand over the row of seeds.

If your soil is too dry to sprout garden seed you can remedy that to some extent by pouring water in the bottom of the seed furrow, planting the seed immediately on the wet soil, and then covering them quickly with soil before the water evaporates.

Another garden problem that has at least 2 answers is, which way should the rows run in the garden? Some gardeners say east and west, and others say north and south.

I've been gardening for over 25 years and during that time I've run the garden rows in every conceivable direction, and I've nearly always gotten good yields regardless of the direction of the rows when I planted good seed, in good soil, and gave the plants good cultivation.

Where the rows run east and west, the south side of the row will get the most sunshine and the plants seem to develop more on the south side than they do on the north side.

Where the rows run north and south, you have a division of the sunshine. One side of the row gets the sunshine in the morning, and the other side of the rows get the sunshine in the afternoon.

But when it comes to the yields of crops, it doesn't make much difference which way the rows run so long as you plant good seed, in good soil, and give the plants good cultivation.

But it does make a difference which way the rows run where you cultivate a garden located on a slope. If you run the rows up and down the slope, the soil is apt to wash. And the best way to prevent that is to run the rows across or around the slope in circle-like terraces.

That little precaution will solve the washing problem in oh, say 80 or 90 per cent of the cases. So don't forget it if your garden is sloping, and inclined to wash.

That's all for this week.

And now until this time next Wednesday, Mother Thompson and I bid you good bye, and good luck.

ANNOUNCEMENT: This is Station_____in_____. You have been listening to Neighbor Thompson's weekly PRIMER FOR TOWN FARMERS from the United States Department of Agriculture.

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PRIMER FOR TOWN FARMERS. Wednesday, March 15, 1933.

FOR BROADCAST USE ONLY.

Speaking Time: 10 Minutes. All Regions.

ANNOUNCEMENT: This is Station_____in_____presenting Neighbor Thompson's weekly PRIMER FOR TOWN FARMERS from the United States Department of Agriculture. The Neighbor's subject for this week is POULTRY.

---oOo---

Our friend, A. R. Lee, poultry specialist of the United States Department of Agriculture, says that what we do with our chickens this year depends largely on what the chickens did for us last year.

If you were fortunate enough to have a bunch of pullets laying during the season of high-priced eggs last fall, you are probably enthusiastic for more chickens this year.

On the other hand, if your pullets were hatched late, and didn't start to lay until Christmas, and you had to dig down in your pocket to buy feed during the season of high prices last fall---you'll probably change the subject when somebody mentions chickens.

Mr. Lee says that the average for the back-yard hen should be about 155 eggs a year. That's about 10 eggs more than the average for the farm flock, but not so much as the average for commercial flocks. Hens in commercial flocks often average 165 eggs or more a year.

And of course, the more eggs a hen lays, the more she's worth to her owner. That's the rule, but don't forget that the time she lays those eggs is important, too.

A hen that lays a large proportion of her eggs during the fall and winter is worth much more than a hen that only lays heavily in the spring and summer. That's because eggs usually bring a higher price in the fall than they do in the spring.

Lee says that a good pullet should lay about 40 per cent of her eggs in the first 5 months after she starts to lay. If a pullet is hatched the first of April, and starts to lay the first of October, she should lay 40 per cent of her eggs for the year in the 5 months following the time when she starts to lay in October. In other words, that pullet will produce a large number of eggs during the months of October, November, December, January, and February. And that includes the season when eggs bring the best prices.

On the other hand, if a pullet is hatched in June and doesn't start to lay until Christmas, she will produce the bulk of her eggs in January, February, March, April, and May----when the price of eggs is comparatively low.

Lee says that Leghorns, and the lighter breeds of chickens begin to lay,

as a rule, around 6 months of age, and that the Reds and the heavier breeds are ready for the nest at from 6 and a half to 7 months of age.

So if you want pullets that will be ready to lay by around the first of October, get your baby chicks in March or April. March and April are the best months for the early hatches.

A Leghorn pullet hatched the first of April should be ready to lay by the first of October, and a Rhode Island Red pullet hatched by the middle of March should start to lay early in October.

So if you want your pullets to lay the bulk of their eggs in the fall and winter, get the baby chicks now, or as soon as you can get to it, and remember that March and April are the best months for the early hatches.

But don't get the chicks until you get everything ready for them. If the chicks arrive ahead of time, or before you have the brooder ready, leave them in the shipping box until you can get the brooder going.

Leave the chicks in the box they come in, and put the box in a room where the temperature is about 70 degrees, and keep the chicks there until you have the brooder ready. But don't lose any time in getting it ready, because the quicker you get the chicks under the brooder, the better off they'll be.

As I came in from the office the other evening I saw our neighbor Casey Smith cleaning up his little brooder, and getting the house ready for baby chicks.

He plans to have 25 good pullets ready for the nests by the first of October. And in order to have 25 good pullets next fall, he's getting 75 baby chicks this spring. And Lee says that's about right because about half of the chicks are roosters-----some will die-----and some will be culls. So out of 75 chicks he expects to get at least 25 good pullets.

After you get the chicks settled under the brooder the next problem is to hold the temperature of the brooder at the proper level. That's important too, because you can spoil the whole brood of chicks in a very few hours if the temperature isn't right.

Mother Thompson and I usually start our brooder off at a temperature of 95 degrees. We try to hold the temperature at that point for the first week, and then gradually decrease it about 5 degrees a week until the end of the 5th week.

After the end of the 5th week we run the temperature at 70 degrees until the chicks learn to do without heat.

And sometimes we give the chicks a little heat on cool nights, or on damp, rainy days even after they've been weaned from the heat. We do that as a precaution. The chicks may not need the heat to keep them warm, but heat dries out the cool, damp air, and keeps the house dry, and that's one of the best ways to prevent some of the most serious chick troubles.

When it comes to feeding baby chicks Mother Thompson and I follow the most modern practice. We feed the chicks as soon as we put them under the brooder. They used to tell us not to feed baby chicks until the chicks were 72 hours old, but they don't tell us that any more. The up-to-date poultryman feeds his chicks now a great deal sooner than he used to.

Twenty-four hours is as long as some poultrymen wait now. Lee says that chicks can be fed any time after they are 24 hours old, and that chicks that are shipped from commercial hatcheries should be fed as soon as they are placed under the brooder.

We usually start our baby chicks on what we call a "starting" mash. We generally figure that 100 pounds of starting mash will furnish enough mash for 100 chicks for the first 4 weeks.

We give our chicks their first taste of green feed when they are a week old, and increase the amount as the chicks get older. Green alfalfa, green clover, and young grass are among the best green feeds for baby chicks, but any good, green, succulent feed will do.

Our chicks get their first taste of hard grain when they are 3 to 4 weeks old. We give them only a very light feeding of finely cracked chick grains at first, and increase the amount as the chicks get older.

Chicks that are hatched around the first of March often fail to get enough direct sunshine. So it's a good idea to give the early chicks a little cod-liver oil for the first 3 or 4 weeks of their lives, unless they get plenty of direct sunshine. One per cent of cod-liver oil is about right, and we always feed it in the mash.

I've had more than the usual number of requests this spring for information and suggestions on mixing chick mashes at home. I suppose that's on account of hard times, and to the big supplies of home-grown grains on hand.

Mother Thompson and I feel that we get the best results when we use a good chick starter for the first four or five weeks, and gradually change to home-grown feeds after that.

Young chickens will begin to eat finely cracked corn by the time they are 3 weeks old. So if you have a supply of cheap corn, and can get it cracked, you can use that for the scratch feed after the chicks are 3 or 4 weeks old. This fine cracked corn can be used with a mash of home-grown grains provided the chicks are supplied with all the milk they can drink. If you feed a starting mash you don't have to worry about the milk because most chick mashes contain plenty of protein.

If you mix your own mash this year be sure to include the following feeds: Yellow corn, other ground grains, and either milk or meat scrap. Milk is one of the best feeds you can give young chicks, but they need minerals if no meat scrap is used.

Mother Thompson and I give our chicks milk as soon as we put them under the brooder. That's the first feed they get. But you have to feed it in

fountains to keep the little rascals from getting into the milk. If you don't keep them out they'll get wet, and are apt to chill.

Baby chicks like to crowd around the drinking water, and crowding is hard on young chicks. So if you don't want your chicks to crowd around the drinking vessel, provide plenty of drinking space.

And don't forget sanitation. The 6 main points in chick sanitation are clean chicks, clean houses, clean range, clean feed, clean water, and clean management.

Most poultrymen observe the first point. They start out with clean chicks, but lose out on some of the other points, and that's why chick losses are so big.

But after you've gone to the trouble and expense of getting good, clean baby chicks, why not try to observe the other 5 points too? A great many poultrymen are doing it. And Mr. Lee says that the poultrymen who are making the greatest success are the ones who observe the 6 points of clean chicks, clean houses, clean range, clean feed, clean water, and clean management.

That's all for this week.

And now until this time next Wednesday Mother Thompson and I bid you good-bye, and good luck.

ANNOUNCEMENT: This is Station_____in_____, and you have been listening to Neighbor Thompson's weekly PRIMER FOR TOWN FARMERS from the United States Department of Agriculture.

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PRIMER FOR TOWN FARMERS. Wednesday, March 22, 1933.

FOR BROADCAST USE ONLY

Speaking Time: 10 Minutes. All Regions.

ANNOUNCEMENT: Neighbor Thompson's weekly PRIMER FOR TOWN FARMERS is now on the air, coming to you from Station _____ in _____ through the cooperation of the United States Department of Agriculture. This week let's consider how to get rid of some of our Unwelcome Visitors.

--------oo--------

The most unwelcome visitors that call at our place wear fur coats.

We never return their calls, and we do everything we can to keep them from calling again. But they keep right on coming, and meddling in our affairs. And I say "meddling", because that's exactly what they do. They poke their nose in everything about the place, and they know a lot more about some of our private affairs than we do ourselves.

But thank goodness, they are not people. They are MICE. The most unwelcome visitors that call at our house are M I C E -----the field mouse, and its relative the house mouse.

By "field" mice we mean meadow mice, and pine mice. Both meadow mice and pine mice have short tails, while ordinary house mice have long tails. That's the way you can tell field mice and house mice apart. Field mice have short, stubby tails, and house mice long, slender tails.

As a rule, house mice do their damage around the house, while field mice do their damage in the field, and in the orchard, and in the garden, and in the lawn, and in the shrubs and the flower beds. Field mice probably do more damage in the average ornamental garden, than any other pest.

But you don't have to put up with mice unless you want to. You can get rid of most mice, including house mice as well as field mice, by following a few simple mouse-control precautions.

But plans to get rid of mice are like a doctor's prescription. They won't give results unless you follow the directions.

If you are having trouble with mice, and want to get rid of 'em, follow the directions and suggestions of somebody who has cleaned mice out of his own premises.

That's the way Mother Thompson and I do. We follow the suggestions put out by the United States Department of Agriculture. Specialists of the department have done a great deal of experimenting to help people get rid of mice. We find, from experience, that their suggestions work right here in this city, and in this part of the country, when those suggestions are carefully followed.

They first suggest that you clean up the nesting places so that the mice

won't have a place to stay. And they suggest that you do that now ----- or just as soon as you can get to it, before the mice have a chance to produce a new crop of young mice this spring.

They suggest you trap the mice too.

Trapping is one of the most practical ways to control mice around the average city home. Of course, you can paint the base of fruit trees with coal tar solutions ---- you can protect shrubs with screens and shields, and you can keep the things that mice like to eat where they can't get to them ---- Those are all steps in the right direction, and they'll help in the control of mice ---- but they won't completely solve the problem.

The only thing that will absolutely solve the mouse problem is to get rid of the mice. And the best way to get rid of mice is to kill them. And the best way to kill mice is to trap 'em ---- or poison 'em.

Mother Thompson and I keep baited traps set in our basement, and in our kitchen all the time. If a mouse gets in the house, it visits the basement, or the kitchen pretty soon after it gets in. When it smells the bait in the trap, and goes to investigate, ---- it probably gets caught, and that is the end of Mr. Mouse. But it isn't a sad ending as far as we are concerned.

Mother Thompson and I are about as careful as the average person in keeping our place cleaned up, and everything in order. We try to prevent mice from coming in and getting a foothold. And we do this by destroying their nesting places and by keeping things clean. Yet in spite of all we can do, a mouse does slip in occasionally. We catch 2 or 3 a year by merely keeping the traps baited and set. That's the way we control the mice around our house. We keep the traps baited with fresh bait and set all the time.

But when it comes to cleaning up field mice in the orchard, and the garden, and around the shrubbery beds, the job is not so easy. Trapping helps keep the field mice under control, but it doesn't solve the field-mouse problem, if there are very many mice.

We use poisoned bait for field mice. Poisoned bait cleans out field mice quicker than anything we've ever tried, but you've got to follow the directions carefully if you want the best results.

Casey Smith, who lives across the street from us, has a vacant lot that joins on to the back of his garden and orchard. The lot is covered with a grass sod, and the sod is literally alive with field mice. Casey has more trouble with field mice than he does with house mice.

The field mice live, and nest, and breed in the sod, and slip out under cover of darkness and gnaw Casey's cherry trees, and his shrubs around the flower beds. Occasionally, an extra nervy mouse takes up quarters near the house, and burrows in and builds its nest under one of Mrs. Smith's best shrubs. When that happens, the Smiths get busy. They know from experience that field mice ruin shrubs and ornamental plants.

Field mice not only girdle the bark around the base of the plants, but they cut and eat the plant roots near their nest, and that causes the roots to rot. The runways the mice tunnel under the plants let in air, and the air dries out the roots and prevents the roots from feeding the plants.

So when you find a field mouse around your shrubs and flowers, get rid of it as soon as you can. If you don't, that field mouse will burrow in and nest, and invite its relatives to join it. And it won't take it and its sisters, and its cousins, and its aunts, long to ruin your plants.

If you have only 2 or 3 mice you may be able to catch them with a trap by hiding the trap at the mouth of the hole. But if you have very many mice, you'll probably get better results by using poisoned bait.

That's what Casey Smith does. He claims it would take a thousand traps to catch all the field mice on his vacant lot. So he uses poisoned bait.

He always plans on poisoning field mice during the spring months. That not only gets rid of the old mice, but by putting out the poison early in the spring, he gets rid of the old mice before they have time to multiply and produce a new crop of young mice. How's that for killing 2 birds with one stone?

Poison baits seem to work better in some parts of the country than they do in others. But officials of the Bureau of Biological Survey have found by actual tests that even under the most unfavorable conditions a heavy application of good poisoned bait will kill enough mice to protect the flowers, and the trees, and the crops.

Casey Smith always uses one precaution. He drops the poisoned bait down in the holes so that it will be out of sight, and where nothing else can get to it. And that's a good precaution, too, when using a deadly poison. Don't leave poisoned bait where children or animals can pick it up.

This is the twenty-second of March and time to start the spring campaign against mice ---- both field mice and house mice before they start on their spring campaign of destruction, and reproduction. Start now, and get the drop on the mice before the old mice produce a new crop of young mice.

And now in conclusion, I'll run over the mouse-control suggestions again.

First, clean up and clear out all nesting and breeding places for mice.

Second, paint the base of trees with coal tar solutions where the mice eat away the bark.

Third, use metal shields and screens where you can't protect the trees and shrubs any other way, but even that won't protect the roots from pine mice.

Fourth, kill the mice by trapping, and by using poison baits.

For detailed information on coal tar solutions, and on poison bait formulas, see your county agent, or write to the United States Department of Agriculture in Washington.

That's all for this week. And now until this time next Wednesday, Mother Thompson and I bid you good bye, and good luck.

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UNITED STATES DEPARTMENT OF AGRICULTURE

Radio Service

OFFICE OF INFORMATION

PRIMER FOR TOWN FARMERS. Wednesday, March 29, 1933.

FOR BROADCAST USE ONLY

Speaking Time: 10 Minutes. All Regions.

ANNOUNCEMENT: This is Wednesday, the day Station _____ presents Neighbor Thompson's weekly PRIMER FOR TOWN FARMERS from the United States Department of Agriculture. Neighbor Thompson's subject for this week is PLANTING THE BACK-YARD GARDEN. And here's the message:

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This is the last week of March.

Spring is here. and it's time to plant the back-yard garden in many sections. In fact, this is just about the last call most places for those early crops that grow and mature while the weather is cool.

Mother Thompson and I have been growing fruits and vegetables on the back end of our lot for more than 15 years. We thoroughly enjoy the work, and expect to have a little garden as long as we are able to work it.

One of our greatest pleasures is to get out in our garden in the spring of the year, and dig up the soil, and plant a few seeds. Digging up a back-yard garden beats a spring tonic all to pieces. And there is no greater pleasure than to grow your own vegetables in your own garden, and then gather and eat them while the vegetables are fresh, and crisp.

But we don't try to grow the bulky crops like potatoes and corn on the little space we have in our back yard because there isn't room enough. We leave the bulky crops to the commercial trucker who has plenty of room. That's his job, and we give it to him. Our plan is to grow a few quality vegetables rather than trying to grow a little of everything.

Back-yard gardeners in the city are faced with 2 problems that the country gardener doesn't have to worry about. One of those is the location of the garden, and the other is shade.

I prefer a location with a southern, or southeastern exposure when I can get it, because a soil on a southern exposure warms up sooner than one on a northern exposure, and because you can plant your garden in a warm soil earlier than you can in a cold soil.

So when you have a choice of locations, take the southern exposure. But don't lose any sleep over the location. If the back end of your lot happens to face the north, just accept it as is---for better or for worse---and cling to it ---and you'll never know the difference in a hundred years. At least that's the was Mother Thompson and I feel about the location.

But you can't handle shade that way because vegetables need sunshine, and some of them suffer unless they get it. W. R. Beattie, garden specialist of the

United States Department of Agriculture, says that a garden ought to get at least 4 or 5 hours of sunshine every day, and more if possible.

He says there are 2 kinds of garden shade---building shade, and tree shade. Building shade is not as hard on a garden as tree shade because it generally shades the plants for a few hours in the morning, and a few hours in the evening, and leaves them exposed to the sun the rest of the day.

Tree shade not only keeps the sun from reaching the vegetables, but the roots of the tree steal plant food and moisture that the plants need. And there are some funny things about tree shade, too. I'll give you an example.

Mother Thompson and I have about a fourth of an acre in our back-yard garden. The rows are about a hundred feet long, and run east and west by the side of a small drainage ditch through which a small stream flows.

I grow fine vegetables on the bank of that ditch even under the partial shade of some big trees that grow on the other side of the ditch. But the roots from those trees do not steal the moisture from my plants in the garden because the ditch supplies them.

One of my neighbors has been trying for 2 or 3 years to grow a garden in the shade of a big oak tree in his back yard. But he fails because the roots from the tree steal the food and moisture from his plants. He says he doesn't understand why I can grow nice vegetables under the shade of trees and he can't. But he forgets that the conditions are very different. My shade amounts to no more than building shade because the roots can't get their supply of moisture without crossing the ditch, while his shade amounts to building shade plus a bunch of thieving roots that rob his soil of plant food and moisture. So lookout for shade, particularly tree shade, when you plan your back-yard garden.

When it comes to soil, I prefer a rich, sandy loam. That's the best type of garden soil. But it's not the only type. If you have a stiff clay soil, work it full of vegetable matter---barnyard manure if you can get it, and break up the soil into fine particles, and make a good seed bed, and you'll have a good garden soil.

Sandy soils are all right, too. Some of the finest gardens I ever saw were growing along the sandy coasts of the Atlantic and Pacific. Sandy soils are often low in humus, and need fertilizers, and when you supply that, a sandy soil makes a good garden.

But the keynote to successful gardening is cultivation. Turn the soil early in the spring---the earlier the better, and continue to work it the rest of the season.

I find from experience that I make the best gardens when I fork up the soil 6 or 8 inches deep early in the spring, and then go back over it again in a few days and cross-fork it in another direction. Cross-forking, or cross-plowing breaks the clods, and pulverizes the soil, and that makes a better seed bed than plowing or forking in one direction all the time.

After we get the soil in good shape, and the garden laid out like we want it, we plant the seed. And we often save ourselves quite a bit of trouble by following 4 simple precautions.

First, we never plant seeds until there is enough moisture in the soil to sprout the seeds. Seeds won't sprout in dry soil.

Second, we never plant the seeds until the soil is warm enough to bring them up. It's a waste of time to plant seeds until the soil is warm enough to grow the plants.

Third, we find that we get the best stands of plants when we plant the seeds at the right depth. If you plant the seeds too shallow or cover them too deep, you won't get the best stand.

Fourth, and last, we never plant until the condition of the soil is right for planting. Don't plant when the soil is too wet, too dry, too rough, or too cold.

Practical gardeners learn how to do these things from experience. And if you are a beginner, and want first hand information on the 4 points that I've mentioned, consult a successful gardener in your community. Nothing succeeds like success, and the best way to learn how to garden is to talk with successful gardeners, and follow their suggestions until experience teaches you how to hoe your own row.

Most back-yard gardeners grow the common vegetables like snap beans, lima beans, tomatoes, lettuce, radishes, cabbage, carrots, beets, onions, spinach, and turnips. But you don't have to stop at that list if you don't want to. You can grow as many more vegetables as you have room to grow, and as you have the time to work. Room and time are the two things that generally control the size of the average back-yard garden.

If time is the thing that limits, you are up against a stone wall. You can't stretch time, but you can crowd some vegetables if you need more room. Beattie says that you can crowd such vegetables as beets, lettuce, carrots, radishes, onions, spinach, and even turnips to some extent. But he says not to crowd the bulky vegetables like tomatoes, potatoes, snap beans, lima beans, and corn. The bulky plants need lots of sunshine, and should not be crowded because crowding shuts out the sunshine.

And remember that there is a difference between crowding and thick stands. It's all right to crowd some plants by pushing the rows a little closer together, but Beattie says that it's a bad practice to leave the plants too thick in the rows. Steal a little space by crowding the rows, but don't crowd the plants in the rows. Thin them out to the proper stands, if you want the best vegetables.

Some gardeners say they get the best vegetables when they run the rows east and west. Others say north and south. I've run rows in every direction of the compass, and I've decided that the direction of the row is not nearly so important as seed, soil, and cultivation.

Mother Thompson and I put our faith in good seed, good soil, and good cultivation. And we've never been disappointed with the results when we had a favorable season.

But remember that it takes a good soil to produce good vegetables. And one of the best ways to make a good garden soil is to work it full of barnyard manure. Sheep manure is also good. So is chicken manure, cow manure, compost, and even rich dirt from the woods.

And you can always fall back to commercial fertilizers when you can't get the manures. When I use a commercial fertilizer on the garden I usually get what is commonly known as a "complete" fertilizer. That's one that is properly balanced. I use a 5--10--5 for our garden. I use about 3 pounds of fertilizer for 100 square feet of ground, and mix it thoroughly with the soil before planting the seeds.

And now in conclusion, let me tell you how I keep from cutting my fingers on broken glass. A back-yard garden is often a "catch-all" from the house, and as such it gets too much broken glass. And broken glass is hard on your hands when you go digging around in the soil.

So when I work the soil, I pick up the pieces of glass and any stones that show up in cultivation, and put them in an ash can in one corner of the garden. I start that program when I turn the soil in the spring, and I keep it up the rest of the year. When the can is full, I send it to the dump. That precaution not only saves my fingers from painful cuts, but it has just about cleared our garden of broken glass and stones. Have you ever tried it?

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